





# 3<sup>rd</sup> Policy Research Conference of the ECBN

# Evaluating the Effectiveness of Macroprudential Policies



14 – 15 September 2017 Ljubljana, Slovenia

# WELCOME

We would like to welcome you to the 3<sup>rd</sup> Policy Research Conference of the European Central Banking Network jointly established by the Bank of Slovenia and the Centre for Economic Policy Research (CEPR).

Objective of this year's conference is to discuss very topical research theme "Evaluating the Effectiveness of Macroprudential Policies".

Rich selection of papers representing research work of eighteen central banks that analyse different types of macroprudential instruments using various methodologies and empirical approaches will enable the participants to learn about country experiences, recognize parallels and distinctions among countries and primarily, share and expand knowledge. Participation of leading academics and practitioners from other financial institutions will enrich the conference by including broader and more theoretical perspective.

We hope that the conference will result in fruitful exchange of knowledge and ideas and as such prove to be valuable for the policy makers.

**Boštjan Jazbec** Governor Bank of Slovenia Fabrizio Coricelli Paris School of Economics and CEPR



# **Conference Venue: Hotel Union**

# Day 1: Thursday, 14 September

## 9.00 – 9.30 Welcome remarks

Boštjan Jazbec, Bank of Slovenia

## 9.30 – 9.55 Keynote speech

Keynote speech by Jan Smets, National Bank of Belgium

## 10.00 - 12.45 Parallel Sessions

Session 1:       Implications of capital-based macroprudential instruments       Session 2:       Assessing macroprudential instruments         Chair:       Claudia Buch, Deutsche Bundesbank Discussant:       Andrea Tiseno, Banca d'Italia       Chair:       Fabrizio Coricelli, Paris School of Economic and Centre for Economic Policy Research Discussant:         "The impact of sectoral macroprudential capital requirements on mortgage lending: evidence from the Belgian risk weight add-on"       Mirna Dumičić, European Central Bank         Authors:       Stijn Ferrari, Mara Pirovano, Pablo Rovira Kaltwasser National Bank of Belgium       "Implementation of macro-prudential tools: examples from Iceland"         "How effective are capital-based macroprudential measures in taming the macro-financial cycles? A structural enquiry into Spain"       Subject Certral Bank of Iceland         Authors:       Eddie Gerba, Javier Mencia Banco de España       "The macroeconomic effects of the regulatory LTV and LTI ratio in the Central Bank of Ireland's DSGE model"         "Implications of the O-SII designation-evidence from Germany"       Authors:       Matija Lozej, Ansgar Rannenberg Central Bank of Ireland         Author:       Ursula Vogel Deutsche Bundesbank       Central Bank of Ireland       Matija Lozej, Ansgar Rannenberg Central Bank of Ireland				
Discussant:       Andrea Tiseno, Banca d'Italia       and Centre for Economic Policy Research         "The impact of sectoral macroprudential capital requirements on mortgage lending: evidence from the Belgian risk weight add-on"       and Centre for Economic Policy Research         Authors:       Stijn Ferrari, Mara Pirovano, Pablo Rovira Kaltwasser       "Implementation of macro-prudential tools: examples from Iceland"         Authors:       Stijn Ferrari, Mara Pirovano, Pablo Rovira Kaltwasser       Author:       Lúðvík Elíasson         "How effective are capital-based macroprudential measures in taming the macro-financial cycles? A structural enquiry into Spain"       Authors:       Eddie Gerba, Javier Mencia Banco de España       "The macroeconomic effects of the regulatory LTV and LTI ratio in the Central Bank of Ireland's DSGE model"         "Implications of the O-SII designation-evidence from Germany"       Author:       Matija Lozej, Ansgar Rannenberg Central Bank of Ireland	Session 1:		Session 2:	•
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Author: Ursula Vogel Central Bank of Ireland		Banco de España		
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12.45 – 14.00 Lunch



# 14.00 – 14.25 Keynote speech

Keynote speech by John Fell, European Central Bank

### 14.30 - 17.00 Parallel Sessions

	Session 3:	Calibration of macroprudential instruments	Session 4:	Macroprudential instruments and risk development in the household sector
	Chair: Discussant:	Reiner Martin, European Central Bank Martin Summer, Oestereichische Nationalbank	Chair: Discussant:	Alan Ahearne, Central Bank of Ireland Jörn Kleinert, Karl-Franzens-Universität Graz
		bt-service-to-income limits: how MICRO-data ne MACROprudential policy" Piotr Bańbuła, Arkadiusz Kotuła, Joanna Przeworska, Pawel Strzelecki Narodowy Bank Polski	new lending" Authors:	tial mortgage restrictions and the risk profile of John Joyce, Fergal McCann, Ellen Ryan Central Bank of Ireland rtgage defaults: Cross-country evidence"
		macroprudential limits on mortgage lending: A BVAR approach"	Authors:	Irina Stanga, Razvan Vlahu, Jakob de Haan De Nederlandsche Bank
	Authors:	Martin O'Brien, Conor O'Toole Central Bank of Ireland		on the measure on long term consumer loans on of household lending quality"
	"Developing ea Bulgaria" Authors:	arly warning indicators for the banking sector in Viliyana Novoselska, Silvia Prokopieva Bulgarian National Bank	Author:	Maja Ilievska Nikolikj National Bank of the Republic of Macedonia
19.00	Dinner			

Dinner speech by José Luis Peydró, Advisory Scientific Committee, ESRB / Universitat Pompeu Fabra



# Day 2: Friday, 15 September

## 9.00 – 9.25 Keynote speech

Keynote speech by Stijn Claessens, Bank for International Settlements

### 9.30 - 12.15 Parallel Sessions

Session 5:	Implications of real estate macroprudential instruments – microdata-based evidence	Session 6:	Macroprudential instruments targeting deposits	
<b>.</b>		Chair:	Martin Wagner, Technical University Dortmund	
Chair:	Primož Dolenc, Bank of Slovenia	<b>D</b> . (	and Institute for Advanced Studies, Vienna	
Discussant:	Meta Ahtik, Bank of Slovenia	Discussant:	Jan Babecký, Czech National Bank	
"Macropruder from the UK"	tial policy and the housing market: evidence		management and potential impact of ial liquidity measures"	
Authors:	José-Luis Peydró, Francesco Rodriguez-Tous,	Author:	Domenica di Virgilio	
	Jagdish Tripathy, Arzu Uluc Bank of England		Bank of Slovenia	
	5	"Reserve requ	irements as instrument of macroprudential	
"Macropruder	"Macroprudential policy and borrower behaviour: How do limits		Bosnia and Herzegovina's monetary regime"	
	ue and loan-to-income ratios impact borrower	Author:	Dragan Jović	
•	house purchasing decisions?"	Central Bank of Bosnia and Herzegovina		
Authors:	Christina Kinghan, Yvonne McCarthy, Conor			
	O'Toole		croeconomic and macroprudential measures on	
	Central Bank of Ireland	•	iroisation in CESE countries"	
"De leen te vr	alua cono conorato additional conoral nurneco	Author:	Ivana Rajkovic	
loans?"	alue caps generate additional general purpose		National Bank of Serbia	
Authors:	Selva Bahar Baziki, Tanju Çapacıŏglu			
	Central Bank of the Republic of Turkey			

12.15-13.30 Lunch



#### 13.30 - 15.55 Session

Session 7:	Macroeconomy, sentiments, financial cycle and macroprudential policy		
Chair: Discussant:	Arjana Brezigar Masten, Bank of Slovenia Matej Marinč, Faculty of Economics, University of Ljubljana		
"FISS – a facto Authors:	or based index of systemic stress in the financial system" Tibor Szendrei, Katalin Varga Magyar Nemzeti Bank		
"Financial cycles: what are they and what do they look like in Denmark?" Authors: Oliver Juhler Grinderslev, Paul Lassenius Kramp, Anders Farver Kronborg, Jesper Pedersen Danmarks Nationalbank			
"Sentiments, business cycle and financial conditions" Authors: Matteo Barigozzi, Antonio M. Conti, Fabrizio Venditti Banca d'Italia			

## 15.55 - 16.15 Closing remarks

Boštjan Jazbec, Bank of Slovenia Fabrizio Coricelli, Paris School of Economics and Centre for Economic Policy Research Claudia Buch, Deutsche Bundesbank

# **SPEAKERS PROFILE**



#### Alan Ahearne, Central Bank of Ireland

Alan Ahearne is a member of the Board of the Central Bank of Ireland and also the Director of the Whitaker Institute and Professor of Economics at the National University of Ireland, Galway. He is Chairman of the ESRI and Department of Finance Joint Research Programme on the Macro-economy and Taxation. He has served as adviser to the IMF, as research fellow at Bruegel, and as economic adviser to Ireland's former Minister for Finance Brian Lenihan. Before joining NUI Galway, he was Senior Economist at the Federal Reserve Board in Washington, DC. He has taught economics at Carnegie Mellon University, the University of Virginia, University College Dublin, Dublin City University and the University of Limerick. Alan began his professional career with Coopers & Lybrand and also worked for Bank of Ireland Group Treasury. His areas of expertise are macroeconomics and international finance and his research has been published in leading international journals. He holds a PhD in economics from Carnegie Mellon University.



#### Meta Ahtik, Bank of Slovenia

Graduated from the Faculty of Law, University of Ljubljana and continued with her PhD studies at the Faculty of Economics, University of Ljubljana (completed in 2010) while working as a researcher at the Faculty of Law (Chair of Legal and Economic Science), where she has held a title of an assistant professor of Law & Economics since 2011. Her research interests spread from law & economics to monetary economics and banking. She worked at the European Central Bank between 2012 and 2014. Currently she is the Head of Macroprudential Policy Implementation Section at the Bank of Slovenia and Researcher at the Institute for Comparative Law, University of Ljubljana.



#### Jan Babecký, Czech National Bank

Dr. Jan Babecký is Research Coordinator at the Economic Research Division at the Czech National Bank, Prague. He received his Doctorate in Economics from the University of Paris-1 Panthéon-Sorbonne and PhDin Economics from the Centre for Economic Research and Graduate Education at the Charles University, Prague. His research interests concentrate on international macroeconomics, international finance, labour economics, and fiscal policy. His research appeared in a wide range of journals including Journal of Financial Stability, Journal of International Money and Finance, Journal of Comparative Economics, Labour Economics, Scandinavian Journal of Economics, and the Economics of Transition. Web Page: http://www.cnb.cz/en/research/research\_economists/



#### Piotr Bańbuła, Narodowy Bank Polski

Mr. Bańbuła is Head of Macroprudential Policy Division, Narodowy Bank Polski and also an Associate Professor at Warsaw School of Economics, where he teaches Finance, Asset Pricing and Financial Engineering. He has worked in central banking for several years, both at the NBP and at the European Central Bank, in the areas of financial markets, reserve management, exchange rates, external developments and financial stability. His current research interests include measurement of risk, systemic risk, household finance and wealth.



#### Selva Bahar Baziki, Central Bank of the Republic of Turkey

Ms. Baziki, PhD is an economist in the Macro Financial Analysis Division of the Banking and Financial Institutions Department of the Central Bank of the Republic of Turkey. Selva co-authors the semi-annual Financial Stability Report monitoring and analyzing credit developments and credit risk present in the banking sector in Turkey as well as conducting research projects on banking and trade. She holds a PhD in Economics from Uppsala University (2015), Sweden, and a BA in Economics cum laude from Bryn Mawr College, USA (2005). Previously, Selva was employed at the Research Department of the Federal Reserve Bank of Boston, USA and the Research Institute of Industrial Economics, Sweden.



#### Arjana Brezigar Masten, Bank of Slovenia

Arjana Brezigar Masten is Director of Analysis and Research Department at the Bank of Slovenia. She also is Assistant professor of Economics and programme coordinator of the undergraduate study of Mathematics in Economics and Finance at the Faculty of Mathematics, Natural Sciences and Information Technologies, Koper (Slovenia). As an assistant professor, she also cooperates with the Faculty of Business Studies, Catholic Institute, Ljubljana (Slovenia). Previously she worked at the Institute for macroeconomic analysis and development, where she helped to establish and then led the modeling unit. She also participates in several international research programmes and business consulting projects. Her main research interest is applied econometrics, forecasting, macroeconomics and financial markets. Her publications include articles in academic journals publications in collected volumes and working papers.



#### Claudia M Buch, Deutsche Bundesbank

Professor Claudia M Buch is the Vice-President of the Deutsche Bundesbank. She is responsible for Financial Stability, Statistics and Internal Audit. Professor Buch is the accompanying person of the President of the Bundesbank on the ECB Governing Council and a member of the German Financial Stability Committee (FSC). Prior to joining the Bundesbank in May 2014, she was the President of the Institute for Economic Research (IWH) in Halle (2013-2014), Professor of Economics at the Otto von Guericke University Magdeburg (2013-2014), and Professor of Economics for "International Finance and Macroeconomics" at the University of Tübingen (2004-2013). From 2012 to 2014, she was a member of the German Council of Economic Experts. She was Scientific Director at the Institute for Applied Economic Research (IAW) in Tübingen (2005-2013), and worked at the Institute for World Economics in Kiel (IfW) from 1992 until 2013. She habilitated at the University of Kiel (2002) after receiving her doctorate there in 1996. Between 1985 and 1991, she studied Economics at the University of Bon and she graduated from the University of Wisconsin (Eau Claire) with a Master of Business Administration degree in 1988. Her fields of specialisation are financial stability, international banking, international finance and macroeconomics, and financial integration.

#### Stijn Claessens, Bank for International Settlements

Mr. Claessens represents the BIS externally in senior groups, including the Financial Stability Board, the Basel Committee on Banking Supervision and the G20. Within the BIS, he leads policy-based analyses of financial sector issues and oversees the work of the Committee on the Global Financial System and other committee secretariats. Between 1987 and 2006, he worked at the World Bank in various positions. From 2007 to 2014, he was Assistant Director in the Research Department of the International Monetary Fund. From 2015 to early 2017, he was Senior Adviser in the Division of International Finance of the Federal Reserve Board. He holds a PhD in business economics from the Wharton School of the University of Pennsylvania and a master's degree from Erasmus University, Rotterdam. He taught at the New York University business school and the University of Amsterdam. Mr Claessens is author of numerous publications in the fields of finance, international finance and international capital flows and further details are available here: https://www.bis.org/author/stijn\_claessens.htm.

#### Fabrizio Coricelli, Paris School of Economics

Fabrizio Coricelli holds a PhD in Economics from the University of Pennsylvania. He is currently Professor of Economics at Paris School of Economics in Paris and a Research Fellow at CEPR in London. He has previously worked in several international institutions, such as the International Monetary Fund, the World Bank, the European Commission and EBRD. He has also taught in various universities (University of Siena, Italy, Central European University in Budapest and University of Ljubljana).



#### Domenica Di Virgilio, Bank of Slovenia

Ms. di Virgilio, PhD, is Researcher at Bank of Slovenia, Department of Financial Stability and Macroprudential Policy. She received her Doctorate in Finance from Bocconi University and Graduate Education from the University of Salerno. Her PhD thesis includes three chapters on 1) model averaging to make forecasts on stock returns, 2) Markov switching model for the European sovereign bonds and 3) multiple equilibria during the Eurozone sovereign debt crisis. Her research interests concentrate on financial econometrics, financial regulation and financial economics.



#### Sophia Doeme, Oesterreichische Nationalbank

Ms. Doeme is an Analyst at the Austrian National Bank's Financial Stability and Macroprudential Supervision Division since 2015. Her main areas of research include the analysis of systemic risks in the Austrian banking sector and the financial market stability implications of bank resolution. She also works on impact assessments of different macroprudential measures in Austria. She holds degrees from the University of Saint Andrews and the University of Graz.



#### Primož Dolenc, Bank of Slovenia

Mr. Dolenc graduated from the Faculty of Economics, University of Ljubljana, where he finished also his masters and PhD studies. In 2006 he defended his doctoral thesis on sovereign assets and liabilities management. From 2000 until appointment as Vice-Governor of the Bank of Slovenia in 2016 he held several advisory and managerial positions in financial market institutions (state treasury and banks). He is a full professor and researcher at University of Primorska, responsible for graduate course on banking and finance. As an academic he is author and co-author of many peer reviewed articles on finance, financial institutions and financial markets, co-author of three university textbooks and several monograph publications; he held speeches at numerous international conferences and several foreign universities.



#### Mirna Dumičić, European Central Bank

Ms. Dumičić is an economist and a financial stability expert at the Macroprudential Policy Division in the European Central Bank, where she came in October 2016 from the Financial Stability Department of the Croatian National Bank. Ms. Dumičić holds a PhD in economics from Faculty of Economics, University of Split. In 2012, she and her co-author Tomislav Ridzak won the Annual award of the prof. dr. Marijan Hanzekovic Foundation for the best research paper and in 2015 she won two awards for the best doctoral thesis - Annual award "Pero Jurkovic, PhD" and the Accountants and Financial Officers Award.



#### Lúðvík Elíasson, Central Bank of Iceland

Mr. Elfasson is a senior economist in the financial stability department at the Central Bank of Iceland since 2012. He received a PhD degree in economics from the University of Washington in 2001. He worked on forecasting and model development at the Central Bank of Iceland (2001-2005) and at the National Bank of Iceland (2005-2009) and was a chief economist at MP Bank (2009-2011). He worked for parliamentary commissions studying the role of banks and housing finance in the 2008 financial crisis in Iceland.



#### John Fell, European Central Bank

John Fell is the Deputy Director General for Macroprudential Policy & Financial Stability in the ECB. He is also the chair or co-chair of several international working groups - including the Macroprudential Policy Group (MPPG) of the ECB's Financial Stability Committee (FSC), the Instrument Working Group (IWG) of the European Systemic Risk Board (ESRB), and the ESRB's Task Force on stress-testing. Between 2003 and 2010, he was Head of the ECB's Financial Stability Division and inaugural Editor of the ECB's Financial Stability Review. Prior to that, he was an Adviser in the ECB's Monetary Policy Directorate. Before joining the ECB in 1998, he held various positions at the European Monetary Institute (EMI) and the Central Bank of Ireland. John holds postgraduate degrees in Economics (1987) and in Finance (1993) from University College Dublin and Dublin City University respectively. He has published his research in several academic and policy journals.

#### Stijn Ferrari, National Bank of Belgium

Mr. Ferrari holds a PhD of Katholieke Universiteit Leuven. He works in the Prudential policy and Financial stability department of the National Bank of Belgium since 2009. His main areas of expertise lie in both systemic risk analysis and the macroprudential policy domain.





#### Eddie Gerba, Banco de España

Mr. Gerba (PhD) is a Senior Research Economist in the Financial Stability-and Macroprudential Policy Department at Banco de España. Besides being involved in policy work, he is leading the implementation of DSGE models at the Bank and is developing different tools to evaluate the effectiveness of macroprudential policies. Eddie joined the Bank just over a year ago, after having worked as an academic at London School of Economics for several years. He is also a Distinguished Fellow at CES Ifo Institute in Munich. Eddie's research interests lie at the intersection between macroeconomics and quantitative finance. Of particular interest to his research are the interactions and linkages between financial markets and the macroeconomy. This includes topics such as credit cycles, financial intermediation theory, financial crises, risk management and business cycles. Method-wise, his interests and experience lie in DSGE-models, bounded rationality, computational methods, time-series econometrics, and derivative pricing models. In 2015, he published a book on 'Financial Cycles and Macroeconomic Stability: How Secular is the Great Recession?' The book explores the secular stagnation phenomenon and investigates the role of US financial developments over the past 60 years.

#### Jörn Kleinert, University of Graz, Austria

Prof. Dr. Jörn Kleinert teaches economics, in particular International Economics, at the University of Graz, Austria. After studying in Tuebingen, Germany he has started his career as economist at the Kiel Institute of World Economics in Kiel, Germany, where he received his PhD in 2003. From 2004 to 2010 he has hold a position as assistant professor at Tuebingen and two short-term positions in Munich, Germany before he moved to Graz in 2010. Since 2013 he is the head of the department of economics in Graz. He is interested in international integration in general and European integration in particular from both perspectives: real trade and international macroeconomics. Moreover, multinational firms have been a focus of his theoretical and empirical research for quite some time. Recently, he is studying the great recession using general equilibrium models that incorporate heterogeneous agents in goods and factor markets.

#### Matej Marinč, Faculty of Economics, University of Ljubljana

Matej Marinč is an associate professor at the Faculty of Economics, University of Ljubljana. His main area of research is financial intermediation. His articles were published in several international journals, including Journal of Financial Stability, European Journal of Law and Economics, International Review of Financial Analysis, Industrial and Corporate Change, and books (e.g., The Economics of Bank Bankruptcy, monograph at Springer) and his work was presented at many international conferences. He also serves as an associate editor of Electronic Commerce Research and as a referee for several international journals. Matej Marinč received a PhD in economics from the University of Amsterdam.



#### Maja Ilievska Nikolikj, National Bank of the Republic of Macedonia

She has been working in the Financial Stability and Banking Regulations Department at the National Bank of the Republic of Macedonia for almost five years. She finished postgraduate studies on the topic Banking and Finance, with the Master thesis on the topic "Mergers and acquisitions in the Macedonian banking system: Analysis of the consequences". During her working experience in National Bank she contributed on the topic stress testing and has also been involved in developing econometric equations that relate the non-performing loans of households and companies with several macroeconomic and financial variables. She has also estimated Panzar-Rosse and Lerner indexes for measuring competition in the Macedonian banking system and created contagion matrix for identifying cross-sectional dimensions of systemic risk. Also, she developed the methodology for identifying systemically important banks and the additional capital requirements for these banks.



#### Boštjan Jazbec, Bank of Slovenia

Boštjan Jazbec graduated from the Faculty of Economics, University of Ljubljana, and continued his studies at the Central European University in Budapest and Prague. After completing his PhD studies in Economics at the Institute for Advanced Studies in Vienna he defended his doctoral thesis on real exchange rate determination in transition economies at the Faculty of Economics, University of Ljubljana. His research interests focused on the macroeconomic topics including the impact of structural reforms on the exchange rate determination and the convergence of the transition countries to the European Union (EU). He worked as a short-term consultant for the European Bank for Reconstruction and Development (EBRD) and the World Bank in Washington, DC. In July 2003, he was appointed to the Board of the Bank of Slovenia and continued his post until 2008. After 2008, he worked as a consultant to the International Monetary Fund (IMF) at the Central Bank of Kosovo and the Central Bank of Suriname. In July 2013 he was appointed for the Bank of Slovenia and the member of the Governing Council of the ECB. In September 2016 he became a member of the Bank for International Settlements' (BIS) Central Bank Governance Group.



Mr. Jović graduated from the Faculty of Economics, the University of Banjaluka (Bosnia and Herzegovina). After that, he worked in the Institute of Urbanism of the Republic of Srpska on economics research, and during his work in the commercial banking sector (Agroprom bank AD Banjaluka) he was a Credit Officer and Head of Corporate Sector. Since 2002, he has been working in the Central Bank of Bosnia and Herzegovina in the banking department, and from 2013, in the Office of Chief Economist. He finished the postgraduate studies in Belgrade (Faculty of Economics, University of Belgrade), and he defended his doctoral thesis - Stocks and Market Risk in Banking. He has published three books on BH banking, and more then 70 articles on BH banking.



#### Paul Kramp, Danmarks Nationalbank

Mr. Kramp holds a PhD from Copenhagen university and has been working at Danmarks Nationalbank since 2002 in different departments. The last 9 years he has worked in the department of Economics and Monetary Policy, on both the Danish and international economy. He mainly writes macro-economic policy papers and briefs. His main areas of interest are the connection between the real economy and the financial side, balance of payments and taxes especially housing taxes.



#### Matija Lozej, Central Bank of Ireland

Mr. Lozej, Senior Economist, has been working mainly on the DSGE-related issues of the Macro Modelling Project. He holds a PhD from the University of Amsterdam. Prior to joining the Central Bank of Ireland, he worked in the Analysis and Research Division at the Bank of Slovenia and at the University of Primorska, Faculty of Mathematics, Natural Sciences, and Information Technologies. His research interests are in macroeconomics, where he has worked on DSGE modelling investigating effects of labour market frictions, fiscal policy issues, and macroprudential policies. Empirically, he has investigated the effects of financial market frictions and monetary policy. He has published in the NBER ISOM and in the Journal of Macroeconomics.



#### Reiner Martin, European Central Bank

Reiner Martin is Deputy Head of the European Central Bank's Macroprudential Policy Division (part of the Directorate General Macroprudential Policy and Financial Stability), responsible for assessing macro-financial risks and the macroprudential policy stance in euro area countries. He is also closely involved in developing resolution strategies for non-performing loans. Prior to his current role, he was a key contributor to the ECB's top-down stress testing activities and was heading the ECB financial sector teams for Cyprus, Spain and Slovenia. From 2008-10 he worked at the Oesterreichische Nationalbank, conducting research on economic and financial developments in emerging markets with a focus on CESEE. Prior to his time at the OeNB he was heading the ECB's Convergence Section, responsible for analysing economic and financial developments in Central, Eastern and Southeastern Europe (CESEE) and assessing the convergence process of CESEE countries. Before joining the ECB, he worked at the German Federal Ministry of Economics and was Research Fellow at the Centre for European Policy Studies (CEPS) in Brussels. He holds a PhD in Economics from the University of Hamburg (Germany) and Masters degrees in economics and political science from the Universities of Sussex and Bristol (UK).



#### Yvonne McCarthy, Central Bank of Ireland

Ms. McCarthy is an economist at the Central Bank of Ireland and a Deputy Head in the Financial Stability Division. She holds a PhD from University College Dublin. Her research interests include borrower based macroprudential policy calibration and evaluation, housing markets and household finances. She is particularly interested in the insights micro level data can bring to these issues.



#### Martin O'Brien, Central Bank of Ireland

Mr. O'Brien has been Head of Macroprudential Policy in the Financial Stability Division of the Central Bank of Ireland since June 2016. He leads the team in conducting analysis on systemic risk, policy design and implementation as well as evaluation to inform policy-makers decisions on the existing and emerging issues in macroprudential policy. Prior to taking up his current role Martin was Senior Economist in the Irish Economic Analysis Division of the Bank with responsibility for macroeconomic forecasting, scenario and conjunctural analysis, with particular recent emphasis on stress testing and the implications of Brexit. He has represented the Bank in a number of related ESCB working groups and task forces. His current research focusses on appropriate identification of cyclical systemic risk for policy purposes as well as time series techniques in evaluating borrower-based measures. He holds a PhD from University College Dublin.













Viliyana Novoselska joined the Bulgarian National Bank in 2008 and as a Eurozone market analyst at the foreign exchange reserve management directorate of the Bulgarian National Bank. In 2015 she joined the Banking Supervision Department and became part of the Macroprudential Supervision and Financial Stability Directorate. Her main focus areas are the development of an early warning indicators database, and the visualisation of risks through heatmaps and dashboards. She participates in the BNB Stress testing team and regularly contributes with analyses to the quarterly Banks in Bulgaria report as well as to various working groups under the auspices of the European Systemic Risk Board (ESRB). She graduated with a BA in Business Administration from Richmond, The American International University in London and has a MSc in Finance and Investment from the University of Edinburgh Business School. She is a level III candidate in the CFA program.

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Ms. Ryan is an economist at the Central Bank of Ireland. As a member of the Macroprudential Policy team her work focuses on the calibration and implementation of macroprudential policies and approaches to monitoring systemic risk. She is currently studying towards a PhD at University College Dublin and holds a MSc from University College London.





An economist from Ghent University, Jan Smets joined the Research and Economics Department of the National Bank of Belgium in 1973. Between 1988 and 1994, he served as Economic Chief of Staff to Prime Ministers Martens and Dehaene. In 1994, he returned to the National Bank as Head of the Research and Economics Department. In 1999, he was appointed Director of the NBB and at the same time was chosen to fill the post of General Commissioner for the Euro, responsible for preparing the change over to the euro in Belgium. He was also Vice-President of the High Council for Employment for several years. In March 2015, he took over as Governor of the National Bank of Belgium and became a member of the European Central Bank's Governing Council and General Council. He also chairs the Public Sector Borrowing Requirements section of the Belgian High Council of Finance. In his capacity as Governor, he is a member of a number of international and national financial organisations and institutions.

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Martin Summer is Head of the Economic studies division at OeNB. Before he joined OeNB in 2000 he worked as a lecturer at the University of Vienna, University of Birmingham and the University of Regensburg. He also worked as a visiting researcher at the Bank of England and the Financial markets Group of the London School of Economics in 2004 and as an academic advisor to the Bank of England. His research interests are Banking Regulation and Systemic Risk, Financial Stability and Financial Economics. He holds a PhD in economics from the University in Vienna.



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Since October 2012 Martin Wagner is Professor of Econometrics and Statistics in the Faculty of Statistics of the Technical University Dortmund. He was educated in Vienna, at the Technical University and the Institute for Advanced Studies, obtaining Diplomas in Mathematics (1995) and Economics (1998), as well as his Doctorate (2000). He obtained his habilitation in Economics in 2007 at the University of Bern. Martin Wagner has worked at the Technical University of Vienna, the Institute for Advanced Studies in Vienna, the University of Bern and has been Professor of Econometrics and Empirical Economics at the University of Graz before his arrival in Dortmund. Visiting positions have brought him to Princeton University and the European University Institute in Florence. In addition to his position at TU Dortmund, Martin Wagner is Faculty Member of the Ruhr Graduate School in Economics, Fellow at the Institute for Advanced Studies in Vienna and Visiting Professor at the University of Ljubljana.





